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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/677,420	10/05/2000	Mitsuaki Oshima	2000-1390	6143

7590 07/11/2003

Wenderoth Lind & Ponack LLP
2033 K Street NW
Suite 800
Washington, DC 20006

EXAMINER

LE, AMANDA T

ART UNIT

PAPER NUMBER

2634

DATE MAILED: 07/11/2003

23

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/677,420

Applicant(s)

OSHIMA ET AL.

Examiner

Amanda T Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 April 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 24-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 24-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 April 2003 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 23 April 2003 is: a) ☒ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 18. 6) ☐ Other:

Response to Arguments

1. Applicant's arguments with respect to claims 24-29 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
4. Claims 24-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Farias et al (IDS filed on 01/09/01) in view of Kao (IDS filed on 01/09/01).

Regarding claims 24, 26, 27, 29, Farias et al discloses a transmission system comprising the following claimed limitations: "a modulator operable to assign each of the first and second data streams to a respective constellation in a vector space diagram to produce modulated signals" (Fig. 1, block 1), "the number of signal points of the constellation for the first data stream is different from the number of signal points of the constellation for the second data

stream" (col. 6, lines 52-57), "a transmitter operable to transmit the modulated signals" (Fig. 1, block 1), "the first data stream has a synchronization data, and the synchronization data is located at the beginning of the first data stream" (col. 6, lines 28-35, col. 19, lines 60-61)

Regarding claims 25, 26, 28, 29, Farias et al discloses the following claimed limitations: "a receiver operable to receive a transmitted signal to produce a received signal, the received signal having information of a first data stream and a second data stream, wherein each data stream is assigned to a respective constellation in a vector space diagram, the number of signal points of the constellation for the first data stream is different from the number of signal points of the constellation for the second data stream, and wherein the first data stream has a synchronization data, and the synchronization data is located at the beginning of the first data stream" (Fig. 1, block 2, col. 6, lines 28-35, 52-57, col. 19, lines 60-61), "a demodulator operable to demodulate the received signal to produce the first data stream and the second data stream" (Fig. 10, the stages after block 186).

For the above-mentioned claims, although Farias et al presents that "the inband secondary channel data comprises network management and control information" (col. 6, lines 47-48, col. 1, lines 15-18), the prior art reference fails to teach that "the first data stream has data for demodulation, wherein the data for demodulation follows the synchronization data" and/or "the demodulator produces the second data stream according to the data for demodulation".

Kao discloses a transmission system (Fig. 1, 2) wherein the inband signal is transmitted to the receiver to indicate that constellation change is to be made (col. 4, lines 50-61, col. 5, lines 32-39, col. 6, lines 59-69), and the transmitted inband signal is to be used at the receiver to demodulate the received main data (col. 5, lines 44-49). It would have been obvious to one of

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ordinary skill in the art at the time of the invention to implement Kao's teachings to modify Farias et al's system. By incorporating the capability of having information regarding the constellation change in Farias et al's main channel data in the inband secondary data, as suggested by Kao, one would achieve a system capable of transmitting and receiving adaptive constellation patterns efficiently.

Specification

5. A substitute specification is required pursuant to 37 CFR 1.125(a) because the length of the changes made could cause mistakes during the process of entering the amendments.

A substitute specification filed under 37 CFR 1.125(a) must only contain subject matter from the original specification and any previously entered amendment under 37 CFR 1.121. If the substitute specification contains additional subject matter not of record, the substitute specification must be filed under 37 CFR 1.125(b) and must be accompanied by: 1) a statement that the substitute specification contains no new matter; and 2) a marked-up copy showing the amendments to be made via the substitute specification relative to the specification at the time the substitute specification is filed.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Amanda Le** whose telephone number is **(703) 305-4769**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Stephen Chin**, can be reached at (703) 305-4714.

Any response to this action should be mailed to:

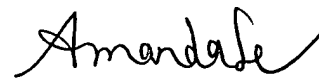
Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.



AMANDA T. LE
PRIMARY EXAMINER